

## Environmental Protection Agency

## Pt. 63, Subpt. NNN, App. C

4.5 50/50 v/v mixture of distilled water and methyl alcohol.

### 5. Procedure

5.1 Determine the sample size as follows:

- If the expected FF is greater than 2 percent, go to Part A to determine sample size.
- If the expected FF is less than 2 percent, go to Part B to determine sample size.
- Part A: Expected FF  $\geq$  2 percent.

Grams resin = 60/expected percent FF

i. The following table shows example levels:

Expected % free formaldehyde	Sample size, grams
2 .....	30.0
5 .....	12.0
8 .....	7.5
10 .....	6.0
12 .....	5.0
15 .....	4.0

ii. It is very important to the accuracy of the results that the sample size be chosen correctly. If the milliliters of titrant are less than 15 mL or greater than 30 mL, reestimate the needed sample size and repeat the tests.

d. Part B: Expected FF < 2 percent

Grams resin = 30/expected percent FF

i. The following table shows example levels:

Expected % free formaldehyde	Sample size, grams
2 .....	15
1 .....	30
0.5 .....	60

ii. If the milliliters of titrant are less than 5 mL or greater than 30 mL, reestimate the needed sample size and repeat the tests.

5.2 Weigh the resin sample to the nearest 0.01 grams into a 250-mL beaker. Record sample weight.

5.3 Add 100 mL of the methanol/water mixture and stir on a magnetic stirrer. Confirm that the resin has dissolved.

5.4 Adjust the resin/solvent solution to pH 4.0, using the prestandardized pH meter, 1.0 N hydrochloric acid, 0.1 N hydrochloric acid, and 0.1 N sodium hydroxide.

5.5 Add 50 mL of the hydroxylamine hydrochloride solution, measured with a graduated cylinder. Start the timer.

5.6 Stir for 5 minutes. Titrate to pH 4.0 with standardized 1.0 N sodium hydroxide. Record the milliliters of titrant and the normality.

### 6. Calculations

$$\% \text{ FF} = \frac{\text{mL sodium hydroxide} \times \text{normality} \times 3.003}{\text{grams of sample}}$$

### 7. Method Precision and Accuracy

Test values should conform to the following statistical precision:

Variance = 0.005

Standard deviation = 0.07

95% Confidence Interval, for a single determination = 0.2

### 8. Author

This method was prepared by K. K. Tutin and M. L. Foster, Tacoma R&D Laboratory, Georgia-Pacific Resins, Inc. (Principle written by R. R. Conner.)

### 9. References

9.1 GPAM 2221.2.

9.2 PR&C TM 2.035.

9.3 Project Report, Comparison of Free Formaldehyde Procedures, January 1990, K. K. Tutin.

## APPENDIX C TO SUBPART NNN OF PART 63—METHOD FOR THE DETERMINATION OF PRODUCT DENSITY

### 1. Purpose

The purpose of this test is to determine the product density of cured blanket insulation. The method is applicable to all cured board and blanket products.

### 2. Equipment

One square foot (12 in. by 12 in.) template, or templates that are multiples of one square foot, for use in cutting insulation samples.

### 3. Procedure

3.1 Obtain a sample at least 30 in. long across the machine width. Sample should be free of dirt or foreign matter.

3.2 Lay out the cutting pattern according to the plant's written procedure for the designated product.

3.2 Cut samples using one square foot (or multiples of one square foot) template.

3.3 Weigh product and obtain area weight (lb/ft<sup>2</sup>).

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3.4 Measure sample thickness.

3.5 Calculate the product density:

Density (lb/ft<sup>3</sup>) = area weight (lb/ft<sup>2</sup>)/thickness (ft)

**Subpart OOO—National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins**

SOURCE: 65 FR 3290, Jan. 20, 2000, unless otherwise noted.

**§ 63.1400 Applicability and designation of affected sources.**

(a) *Applicability.* The provisions of this subpart apply to the owner or operator of processes that produce amino/phenolic resins and that are located at a plant site that is a major source as defined in § 63.2.

(b) *Affected source.* The affected source is:

(1) The total of all amino/phenolic resin process units (APPU);

(2) The associated heat exchange systems;

(3) Equipment required by, or utilized as a method of compliance with, this subpart which may include control devices and recovery devices;

(4) Equipment that does not contain organic hazardous air pollutants (HAPs) and is located within an APPU that is part of an affected source;

(5) Vessels and equipment storing and/or handling material that contain no organic HAP and/or organic HAP as impurities only;

(6) Equipment that is intended to operate in organic HAP service for less than 300 hours during the calendar year;

(7) Each waste management unit; and

(8) Maintenance wastewater.

(c) *Existing affected source.* The affected source to which the existing source provisions of this subpart apply is defined in paragraph (b) of this section.

(d) *New affected source.* The affected source to which the new source provisions of this subpart apply is:

(1) Each affected source defined in paragraph (b) of this section that commences construction or reconstruction after December 14, 1998;

(2) Each additional group of one or more APPU and associated heat exchange systems that has the potential to emit 10 tons per year or more of any organic HAP or 25 tons per year or more of any combination of organic HAP that commences construction after December 14, 1998; or

(3) Each group of one or more process units and associated heat exchange systems that are converted to APPUs after December 14, 1998, that has the potential to emit 10 tons per year or more of any organic HAP or 25 tons per year or more of any combination of organic HAP.

(e) *APPUs without organic HAP.* An APPU that is part of an affected source, as defined in paragraph (c) or (d) of this section, but that does not use or manufacture any organic HAP, is not subject to any other provisions of this subpart and is not required to comply with the provisions of subpart A of this part. When requested by the Administrator, the owner or operator shall demonstrate that the APPU does not use or manufacture any organic HAP. Types of information that could document this determination include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(f) *Exemption from equipment leak provisions.* Affected sources with actual annual production of amino/phenolic resin equal to or less than 800 megagrams per year (Mg/yr) for the 12-month period preceding December 14, 1998 are exempt from the equipment leak provisions specified in § 63.1410. The owner or operator utilizing this exemption shall recheck the actual annual production of amino/phenolic resins for each 12-month period following December 14, 1998. The beginning of each 12-month period shall be the anniversary of December 14, 1998. If the actual annual production of amino/phenolic resins is greater than 800 Mg/yr for any 12-month period, the owner or operator shall comply with § 63.1410 for the life of the affected source or until the affected source is no longer subject to the provisions of this subpart.